

中国小蠹属新种记述

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小蠹属 *Scolytus* Geoffroy 为一大属。蔡邦华等 (1962) 曾将该属种类作过系统修订,并发表了2新种,当时国内已记述的有14种,以后本属种类又有所增加,至今共增添6新种,3新记录,再加原有14种合计全属共23种。为了便于鉴定,特将此23种列检索表如下:

- 1 (34) 腹部向上收缩较陡,侧面观第1与第2腹板构成直角或钝角腹面,少数种类腹部向上收缩较缓,第1与第2腹板连合弓曲,构成弧形腹面;两性额面差别显著;体型较大,平均体长一般在2.5毫米以上;鞘翅刻点为椭圆形
- 2 (29) 腹部向上收缩较陡,侧面观第1与第2腹板构成直角或钝角腹面,在不同腹板上有瘤、齿、毛丛、毛束等特殊结构,或至少雄虫有这种结构
- 3 (18) 第2腹板有瘤,少数种类只雄虫有瘤
- 4 (11) 鞘翅刻点沟与沟间部的刻点大小形状相同
- 5 (6) 第2腹板的瘤两性不同: 雄虫瘤形长大呈指状,瘤端向上方折曲;雌虫瘤很小,两侧扁而端头尖 长脐小蠹 *S. parviclaviger* 新种
- 6 (5) 第2腹板的瘤两性相同
- 7 (10) 瘤形如柱,茎部粗壮,端头平大
- 8 (9) 雄虫腹部第7背板有一对长刚毛 脐腹小蠹 *S. schevyrewi* Semenow
- 9 (8) 雄虫腹部第7背板无一对长刚毛 多毛小蠹 *S. seulensis* Murayama
- 10 (7) 瘤形如锥,茎部纤细,端头尖锐 藏西小蠹 *S. nitidus* Schedl (图1、图2)
- 11 (4) 鞘翅刻点沟与沟间部的刻点大小形状不同
- 12 (15) 腹部腹面有鳞片
- 13 (14) 前胸背板后缘平直;第2腹板的瘤茎部粗壮并有大的端头,两性相同 鳞腹小蠹 *S. squamosus* 新种
- 14 (13) 前胸背板后缘中部延伸呈角形;雄虫第2腹板的瘤茎部细长,有大的端头;雌虫完全无瘤,或略有瘤的痕迹 角胸小蠹 *S. butovitschi* Stark
- 15 (12) 腹部腹面只有茸毛,没有鳞片;雄虫第2腹板有一桩状瘤,第4腹板后缘中部宽大肥厚,形成一弧状瘤,雌虫第2腹板的瘤与雄虫相同,第4腹板无瘤
- 16 (17) 体型较小,体长1.6—2.6毫米 副脐小蠹 *S. semenovi* Spessivtzev
- 17 (16) 体型较大,体长2.0—4.0毫米 毛脐小蠹 *S. pilosus* 新种
- 18 (3) 第2腹板无瘤
- 19 (26) 两性或只雄虫第3、4腹板后缘中部有瘤齿,但从无突起和毛丛
- 20 (23) 两性第3、4腹板只有小齿
- 21 (22) 两性第3、4腹板后缘中部有小齿,极少个体第2腹板后缘中部也有小齿 微脐小蠹 *S. schikisani* Niijima (图3、图4)
- 22 (21) 雄虫除第3、4腹板后缘中部有小齿外,第5腹板后缘有3束刚毛;雌虫第3、4腹板后缘中部有小齿,少数个体小齿消失,第5腹板后缘没有刚毛 三刺小蠹 *S. esuriens* Blandford
- 23 (20) 雄虫第3、4腹板有大瘤
- 24 (25) 雄虫第3腹板后缘中部有一前圆后平的角形瘤,第4腹板后缘中部有一宽厚的唇形瘤;雌虫各腹板均无瘤,额面有中龙骨 白桦小蠹 *S. amurensis* Eggers

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- 25(24) 雄虫第3腹板后缘中部有一极长的指状瘤,第4腹板后缘中部有一宽厚的弧形瘤;雌虫各腹板均无瘤,额面
无中龙骨 指瘤小蠹 *S. jacobsoni* Spessivtzev
- 26(19) 两性各腹板均无瘤齿,但有突起和毛丛
- 27(28) 雄虫第5腹板两侧强烈突起,呈双峰状,峰顶生稠密毛丛;雌虫第5腹板两侧稍微突起,但无毛丛;两性额面
不同:雄凹雌突 枫桦小蠹 *S. dahuricus* Chapuis
- 28(27) 雄虫第5腹板两侧稍微突起,并生毛丛;雌虫不突起,也无毛丛;两性额面相同,均微突起
梅小蠹 *S. aratus* Blandford
- 29(2) 腹部向上收缩较陡,侧面观第1与第2腹板连合弓曲构成圆弧形腹面;腹板正常,没有瘤、齿、毛丛、毛束等特
殊结构
- 30(31) 雄虫额毛粗短如髯,散布于全额面,并自下向上倾伏,指向额中线 山海小蠹 *S. shanghaiensis* 新种
- 31(30) 雄虫额毛细长柔软,集中分布于颞周缘上,毛梢弯曲,拢向额心
- 32(33) 两性口上片平滑;翅后缘有锯齿;体被长毛 云杉小蠹 *S. sinopiceus* Tsai
- 33(32) 雄虫口上片两端各有1瘤,雌虫无瘤;翅后缘无锯齿;体被稀疏短毛 瘤唇小蠹 *S. querci* 新种
- 34(1) 腹部向上收缩较缓,侧面观第1与第2腹板连合弓曲,构成弧形腹面;两性额面差别轻微或全无差别;体型较
小,一般平均体长在2.5毫米以下;鞘翅刻点为圆形
- 35(36) 额面呈颗粒状,两性额部相同,均微突起;雄虫第5腹板后缘附近突起,上有毛丛;雌虫不突起,也无毛丛
落叶松小蠹 *S. morawitzi* Semenov
- 36(35) 额面呈纵针状
- 37(40) 前胸背板刻点粗大,两侧和前缘有部分刻点彼此相连,构成点串;两性额面完全相同:微隆起,上有疏散
短毛
- 38(39) 前胸背板刻点在背中部仍较粗大稠密;鞘翅刻点沟间与沟中同样疏密
皱小蠹 *S. rugulosus* Ratzeburg (图5a、b、c)
- 39(38) 前胸背板的刻点在背中部较为细浅疏散;鞘翅刻点沟间比沟中疏少 果树小蠹 *S. japonicus* Chapuis
- 40(37) 前胸背板刻点细小,即便在两侧和前缘也不构成点串;两性额面略有区别
- 41(44) 鞘翅沟间部无纵向条纹;刻点较深刻稠密
- 42(43) 鞘翅的刻点沟间与沟中疏密相同;雄虫额毛均匀分布于两侧,将中线裸露在外,下短上长,向额上方贴伏
榿小蠹 *S. pome* 新种
- 43(42) 鞘翅的刻点沟间远比沟中稀疏;雄虫额毛遍布全额面,上下等长,毛茎竖立,毛梢曲向额上方
构子木小蠹 *S. abaensis* Tsai et Yin



图1—5 1. 藏西小蠹 *S. nitidus* Schedl ♂腹部侧面观 2. 藏西小蠹 *S. nitidus* Schedl ♂外生殖器
3. 微脐小蠹 *S. schikisani* Nijima ♂腹部腹面观 4. 微脐小蠹 *S. schikisani* Nijima ♂外生殖器
5. 皱小蠹 *S. rugulosus* Ratzeburg ♂外生殖器: a. 全形背面观 b. 旋丝背面观 c. 旋丝正面观

44(41) 鞘翅沟间部有许多纵向条纹, 刻点细浅疏少; 雄虫额面有少许弯曲柔毛, 雌虫额面几乎光亮; 雄虫第5腹板后缘向下方延伸卷曲; 雌虫正常……………小小蠹 *S. confusus* Eggers

长脐小蠹 *Scolytus parviclaviger* 新种

体长 2.8—3.2 毫米。鞘翅长度比前胸背板长度为 1.5。雄虫额面极平, 额毛较少, 只分布在额周缘上, 毛梢拢向额心; 雌虫额面微隆, 额毛疏短, 散布于全额面。前胸背板刻点细小, 在背中部有一纵条平滑无点的背中线区。鞘翅刻点的形状沟间与沟中相似, 但沟间刻点较为疏少。雄虫额部收缩陡峭, 第1与第2腹板构成直角腹面, 第2腹板前缘中部有一极长的指状瘤, 瘤端折曲向上(图6); 雌虫腹部收缩稍缓, 第1与第2腹板构成钝角腹面, 第2腹板正中有一侧扁而头尖的小瘤(图7)。本种与扇脐小蠹 *S. claviger* Blandford 的瘤形相似, 而后者体长 3.4—5.2 毫米, 远较本种为大, 可以与本种区别。阳茎(图8)。

寄主植物: 榆 *Ulmus pumila*.

分布: 山西(降县)。

正模(♂): 山西(降县, 1170 米, 榆, 1972 年 8 月 5 日黄复生采)配模(♀): 产地同上; 副模(1♂, 6♀): 产地同上。

鳞腹小蠹 *Scolytus squamosus* 新种

体长 1.9—2.8 毫米。鞘翅长度比前胸背板长度为 1.3。雄虫额面极平, 额毛长而稠密, 起自额缘拢向额心; 雌虫额面隆起, 额毛短而稀少, 散布于全额面。前胸背板刻点细小稠密, 无平滑无点的背中线区。鞘翅沟间部刻点略小于刻点沟刻点, 但排列整齐, 像沟中刻点一样起自翅基直达翅端。两性腹部结构相同, 侧面观均倾斜向上收缩, 第1与第2腹板形成钝角腹面, 第2腹板前缘中部有一粗壮的桩状瘤(图9)。腹部腹面被鳞片。本种鞘翅的形式、腹部鳞片的分布与角胸小蠹 *S. butovichii* Stark 相似, 但后者前胸背板后缘呈角状, 雌虫第2腹板无瘤, 可以与本种区别。阳茎(图10)。

寄主植物: 常绿榆 *Ulmus lanceaetolia*.

分布: 云南(西双版纳)。

正模(♂): 云南(西双版纳, 950 米, 常绿榆, 1962 年 5 月 11 日宋士美、李兆麟采); 配模(♀); 产地同上; 副模(1♂, 35♀): 产地同上。

毛脐小蠹 *Scolytus pilosus* 新种

体长 2.4—4.0 毫米。鞘翅长度比前胸背板长度为 1.2。雄虫额面平而微凹, 额毛长密, 拢向额心; 雌虫额面微隆, 额毛疏短。前胸背板刻点极为细小, 背中线无点区极短。鞘翅短阔, 刻点沟很深, 沟中刻点呈纵椭圆形, 深大稠密; 沟间部刻点圆形, 极其细小。腹部第1与第2腹板形成直角腹面。雄虫第2腹板前缘中部有一粗壮的桩状瘤, 第4腹板后缘中部加厚成一宽阔的弧形瘤(图11); 雌虫第2腹板的瘤较扁小, 位于腹板的正中部, 第4腹板后缘无瘤。两性腹部腹面均密被细长茸毛。本种与副脐小蠹 *S. semenovi* Spessivtzev 两性分别相似, 但后者体长仅 1.6—2.6 毫米, 显然较小, 且分布在北方, 可以与本种区别。阳茎(图12)。

寄主植物: 阔叶树。

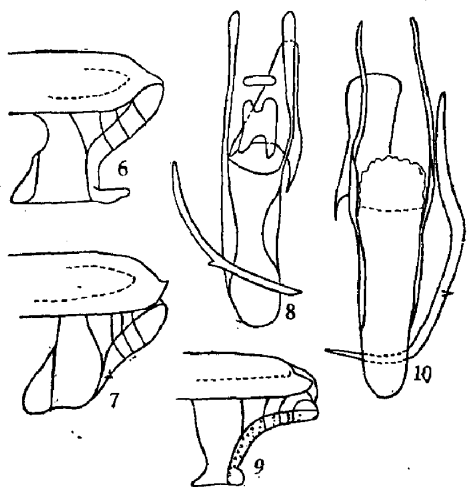


图6 长脐小蠹 *S. parviclaviger* sp. nov.

♂腹部侧面观

图7 长脐小蠹 *S. parviclaviger* sp. nov.

♀腹部侧面观

图8 长脐小蠹 *S. parviclaviger* sp. nov.

♂外生殖器

图9 鳞腹小蠹 *S. squamosus* sp. nov.

♂腹部侧面观

图10 鳞腹小蠹 *S. squamosus* sp. nov.

♂外生殖器

分布: 四川(康定)。

正模(♂): 四川(康定, 1700 米, 阔叶树, 1964 年 5 月 28 日, 黄复生采); 配模(♀): 产地同上; 副模(14♂♂, 25♀♀); 产地同上。

山海小蠹 *Scolytus shanhaiensis* 新种

体长 2.6—3.8 毫米。鞘翅长度比前胸背板长度为 1.6。雄虫额面平而微凹, 额面纵针状条纹粗糙,

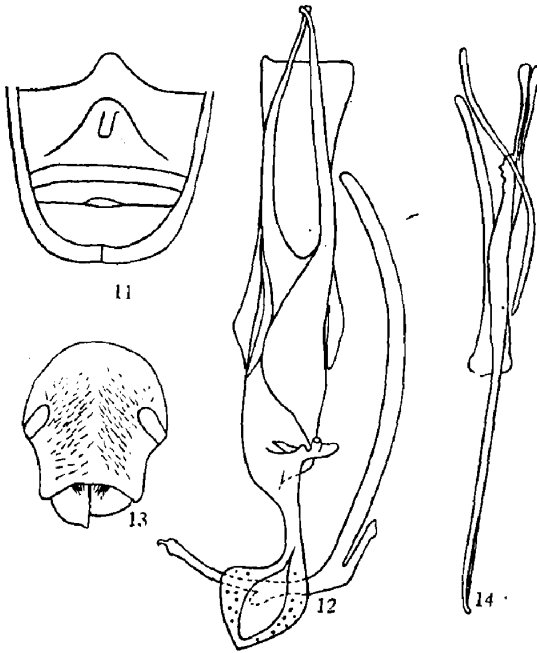


图 11 毛脐小蠹 *S. pilosus* sp. nov.

♂腹部腹面观

图 12 毛脐小蠹 *S. pilosus* sp. nov.

♂外生殖器

图 13 山海小蠹 *S. shanhaiensis* sp. nov.

♂头部额面

图 14 山海小蠹 *S. shanhaiensis* sp. nov.

♂外生殖器

有时呈颗粒状, 额毛并不集中于额周缘上, 而是均匀散布于全额面, 毛粗短如鬃, 自下而上倾伏, 并斜向额中线。着生在额下缘中央缺刻处的刚毛粗密平齐, 好像一排毛刷(图 13)。前胸背板刻点细小稠密, 无背中线条平滑区。鞘翅较长, 刻点沟刻点大于沟间部刻点。腹部收缩较缓, 第 1 与第 2 腹板连合弓曲, 形成弧形腹面, 各腹板均无瘤。由于腹板无瘤因而本种与云杉小蠹 *S. sinopiceus* Tsai 及瘤唇小蠹 *S. queri* 新种相似, 但云杉小蠹和瘤唇小蠹雄虫额毛极其长密, 且集中于额周缘上, 毛梢曲向额心, 和本种截然不同。本种尚未采到雌虫。阳茎(图 14)。

分布: 辽宁(高岭)。

正模(♂): 辽宁(高岭, 1960 年 6 月 10 日); 副模(3♂♂): 产地同上。

瘤唇小蠹 *Scolytus queri* 新种

体长 2.7—4.0 毫米。鞘翅长度比前胸背板长度为 1.5。雄虫额面凹陷, 额毛长而稠密, 毛梢拢向额心, 额下部口上片两端各有一瘤(图 15); 雌虫额面微隆, 额毛短而稠密, 口上片无瘤。前胸背板刻点极细小, 无背中线条平滑区。鞘翅刻点椭圆形, 刻点沟与沟间部的刻点形状大小相同。腹部收缩较缓, 第 1 与第 2 腹

板连合弓曲, 形成弧形腹面。两性各腹板均无瘤。由于本种雄虫额面有拢向额心的稠密长毛, 腹部收缩较缓, 两性各腹板均无瘤, 因而与云杉小蠹 *S. sinopiceus* Tsai 相近, 但后者口上片无瘤, 翅后缘有许多锯齿, 可以与本种区别。阳茎(图 16)。

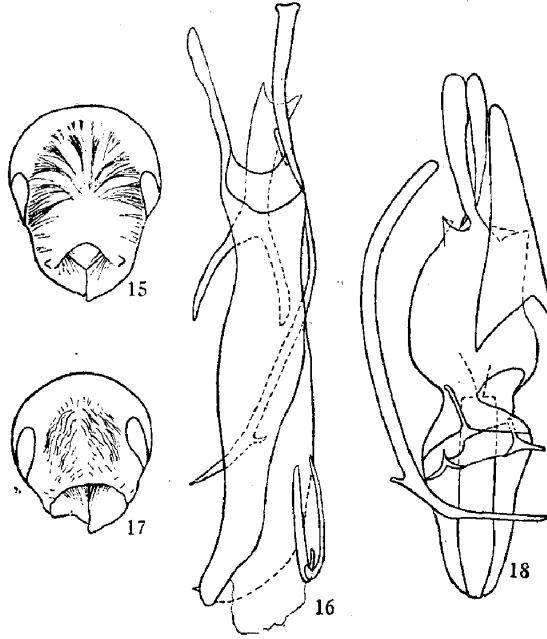
寄主植物: 川西栎 *Quercus gilliana*; 高山栎 *Q. semicarpifolia*。

分布: 四川(马尔康)、云南(丽江)。

正模(♂): 四川(马尔康, 2600 米, 川西栎, 1964 年 6 月 11 日, 黄复生采); 配模(♀): 产地同上; 副模(20♂♂, 20♀♀): 四川(马尔康, 2600 米, 川西栎, 1964 年 6 月 11 日—13 日, 黄复生采); 云南(丽江, 3000—3300 米, 高山栎, 1962 年 6 月 27 日, 7 月 12 日, 7 月 19 日, 8 月 31 日, 宋士美采)。

樱小蠹 *S. pomi* 新种

体长 2.3—3.3 毫米, 鞘翅长度比前胸背板长度为 1.5。雄虫额面平, 额毛均匀地散布于额中线两侧, 将中线裸露出来, 下部额毛最短, 从此向上逐渐加长, 并向上方贴伏(图 17); 雌虫额面平隆, 额毛疏短而直立。前胸背板刻点细小, 即便在两侧和前缘也不连成点串。鞘翅刻点沟很浅, 沟间部狭窄, 沟中与沟间刻点相距很近, 均呈圆形, 两者同样疏密整齐地排列于鞘翅上。腹部收缩较缓, 第 1 与第 2 腹板连

图 15 瘤唇小蠹 *S. querci* sp. nov. ♂头部额面图 16 瘤唇小蠹 *S. querci* sp. nov. ♂外生殖器图 17 樱小蠹 *S. pome* sp. nov. ♂头部额面图 18 樱小蠹 *S. pome* sp. nov. ♂外生殖器

合弓曲,形成弧形腹面。各腹节均无瘤。由于两性额面略有差别,前胸背板刻点细小等特征,本种与栒子木小蠹 *S. abaensis* Tsai et Yin 相似,但后者雄虫额毛上下部等长,它们的分布不受额中线影响,全面散布于额面上;鞘翅沟间部刻点远较刻点沟刻点疏少,可以与本种区别。阴茎(图 18)。

寄主植物: 桃 *Prunus*; *persica*; 毛樱桃 *P. tomentosa*; 滇池海棠 *Malus yunnanensis*; 山荆子 *Malus* sp. 等。

分布: 云南(丽江)、西藏(波密、察隅)。

正模(♂): 西藏(波密, 2750 米, 毛樱桃, 1973 年 6 月 13 日, 黄复生采); 配模(♀): 产地同上; 副模(5♂♂, 20♀♀): 云南(丽江, 2800 米, 山荆子, 1962 年 8 月 27 日, 宋士美采); 西藏(察隅, 2300 米, 桃, 1973 年 8 月 6 日, 黄复生采; 2000 米, 滇池海棠, 1973 年 7 月 29 日, 黄复生采; 波密, 2750 米, 毛樱桃, 1973 年 6 月 13 日, 黄复生采)。

NOTES ON SOME NEW SPECIES OF THE GENUS *SCOLYTUS* GEOFFROY (COLEOPTERA: SCOLYTIDAE)

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This is the second report of our studies dealing with the Chinese species of the genus *Scolytus* Geoffroy. In our first report (1962), 14 species were recorded. Since

then new collections have been made from various parts of our country. This paper includes a synoptic key for 23 species: 6 new species and 3 species of the first record from China, as well as 14 known species. It gives also descriptions of the new species with their penis illustrated. All the type specimens are deposited in the collections of the Institute of Zoology, Academia Sinica, Peking.

The diagnostic features of all the new species are given as follows:

***Scolytus parviclaviger* sp. nov.**

2.8 mm. to 3.2 mm. long. Front strongly flattened and margined with some long incurved hairs in male; subconvex and covered with scanty short pubescence in female. Pronotum covered with fine punctuation, and with a longitudinal impunctate line in the middle. Elytra 1.5 times as long as pronotum, punctures in interstices much similar to those in striae, but less densely placed. Abdomen in the male with 2nd sternite abruptly and perpendicularly ascending, and near the anterior border with a median finger-like tooth recurved upwards at its tip; in the female with 2nd sternite less abruptly ascending, and the median tooth much smaller than in the male, flattened laterally and sharpened at the tip.

The species allies to *S. claviger* Blandford, but differs from it by the much smaller size of the new species.

Host plant: *Ulmus pumila*.

Holotype ♂ Shansi: Jiangxian, 1170 M. VIII. 1972; Allotype ♀: the same locality; Paratypes 1 ♂, 6 ♀♀: the same locality.

***Scolytus squamosus* sp. nov.**

1.9 mm. to 2.8 mm. long. Front in male strongly flattened, densely ringed with erect incurved long hairs; in female subconvex, thinly and shortly pubescent. Elytra 1.3 times as long as pronotum, and regularly striate-punctate from bases to apices, punctures in interstices rather smaller than those in striae. 2nd abdominal sternite obliquely ascending, with a strong blunt tubercle in the middle near the anterior margin, all sternites covered with small pale yellow scales and with no sexual difference on the under surface of abdomen.

Allied to *S. butovitschi* Stark, but the latter with basal margin of pronotum produced backwards into angular form, and 2nd sternite of abdomen unarmed in female.

Host plant: *Ulmus lanceaefolia*.

Holotype ♂ Yunnan: Shishong-Baanna, 950 M. 11. V. 1962; Allotype ♀: the same locality; Paratypes 1 ♂, 35 ♀♀: the same locality.

***Scolytus pilosus* sp. nov.**

2.4 mm. to 4.0 mm. long. Front in male strongly flattened, subdepressed medially, densely margined with erect curved hairs; in female subconvex, scattered with short pubescence. Pronotum very finely punctate, central impunctate line absent. Elytra wide and short, 1.2 times as long as pronotum, striae with punctures oval in shape, and coarsely, closely placed in impressed lines, interstices widened, with punctures round in shape and much smaller, less impressed than those in striae. Abdomen with 2nd sternite abruptly and perpendicularly ascending, with a strong blunt tubercle in the middle near the anterior margin of 2nd sternite, and with a lip-like extension in the middle of the posterior margin of 4th sternite in male; with a smaller tubercle in the centre of the 2nd sternite and with no extension at the posterior margin of the 4th

sternite in female.

The species is allied to *S. semenovi* Spess. in features of both sexes, but it may be readily identified by its much larger size.

Holotype ♂ Szechwan: Kangding. 1700 M. 28. V. 1964; Allotype ♀: the same locality; Paratypes 14 ♂♂, 25 ♀♀: the same locality.

***Scolytus shanhaiensis* sp. nov.**

2.6 mm. to 3.8 mm. long. Front in male flattened, pubescence short and strong, not fringed around the margin, but scattered all over the front surface, and turned upwards to the median line, epistomal median subcircular emargination with dense, short bristles arranged regularly. Elytra rather long which are 1.6 times as long as pronotum, and with punctures in striae larger than those in interstices. Abdomen gradually ascending, 1st and 2nd sternites joined together, and roundly prominent, all sternites unarmed. The female has so far not been collected.

The species allies to *S. sinopiceus* Tsai and *S. quercus* sp. nov., but it can be identified easily by its scattered short frontal hairs.

Host plant: unknown.

Holotype ♂ Liaoning: Gaoling. 10. VI. 1940; Paratypes 3 ♂♂: the same locality.

***Scolytus querci* sp. nov.**

2.7 mm. to 4.0 mm. long. Front in male concave and emargined with close erect long hairs curved at tips towards the centre of front, epistoma with a conspicuous tubercle at its both ends; in female subconvex, scattered with scanty short pubescence, epistoma simple at its both ends. Elytra covered with elongate oval punctures which are much the same both in striae and interstices. Abdomen gradually ascending. 1st and 2nd sternites joined together and roundly prominent, all sternites unarmed in both sexes.

Allied to *S. sinopiceus* Tsai, but the latter with no tubercles at of both ends epistoma in male as well as in female, and with serration at the extremity of elytra in both sexes.

Holotype ♂ Szechwan: Markang. 2600 M. 11. VI. 1964; Allotype ♀: the same locality; Paratypes 20 ♂♂, 20 ♀♀ Szechwan: Markang. 2600 M. 11—13, VI. 1964; Yunnan: Likiang 3000—3300 M. VI—VIII, 1962.

***Scolytus pomi* sp. nov.**

2.3 mm. to 3.3 mm. long. Front in male subflattened, hairs spreading all over the surface, separating by the subcarinate median line longitudinally, curving upwards and becoming greater in length from the lower part to the upper one; in female subconvex. with hairs erect and scant. Elytral striae hardly impressed, punctures in interstices ranged as regularly as in striae, and the two series closely placed. Abdomen with 1st and 2nd sternite conjoined and prominent roundly, all sternites of abdomen simple in both sexes.

The species allies to *S. abaensis* Tsai et Yin, but the latter differs from it by the frontal hairs equally in length in male and the punctures in elytral interstices placed in a more distant manner than in striae in both sexes.

Host plant: *Prunus persica*, *P. tomentosa*, *Malus yunnanensis*, *Malus* sp.

Holotype ♂ Tibet: Pomi. 2750 M. 13. VI. 1973; Allotype ♀ the same locality; Paratypes 5 ♂♂, 20 ♀♀ Yunnan: Likiang. 2800 M. 27. VIII. 1962; Tibet: Chayu. 2000—2300 M. VII—VIII. 1973; Pomi. 2750 M. 13. VI. 1973.